ABSTRACT

A door leaf includes a stiff, light structural part that maintains fed-in vibrational energy and, by flexural waves, propagates this energy in at least one active surface perpendicular to its thickness to distribute resonance mode vibration components over at least one surface, which has specified, preferred locations or sites within it for transducer devices, which are affixed on the structural part at one of the locations or sites to set the structural part into vibration and to allow it to resonate, thus creating an acoustic radiator that delivers an acoustic output signal when it vibrates in resonance, the front and/or the rear cover panel of the door leaf being part of the stiff, light structural component. The transducer(s) is/are situated between the cover panels. This arrangement provides a door with a loudspeaker function, which needs no extra volume compared to an ordinary door, and which is able to provide sound reliably and comprehensively to one or more rooms, which adjoin this door acting as a loudspeaker. Advantageously, additional loudspeakers or loudspeaker boxes are not required in a room that receives sound by this door with loudspeakers.